

**Disconnection, Disintermediation and Disaffection:
Transformative Change and 'Human-Centred' Impact in a
small specialist Library Service**

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Abstract

The dissertation subject is "Transformative change and human-centred impact in a small specialist Library service". The aim of the dissertation is to investigate the psychological and sociological effects of transformative change on those who both drive, and are driven by that change. The dissertation is qualitatively based, as much of the research will centre on the 'soft-systems' (Checkland, 1981) which underpin any move towards a technological solution to an existing situation. The literature review examines existing research in this area, and this informs the direction of the dissertation. The dissertation is relevant to practitioners within Higher Education, as the move towards virtualisation of library services is likely to increase as pressure on institutions grows to offer increased access to services, without an increase in staffing levels. 'Virtualisation' in this sense can be defined as "the creation of a product, service, or organization that has an electronic rather than a physical existence." (BNET.com) The final dissertation report focuses on the 'human-centred' issues that have arisen during the period of the research, recommendations for others undertaking a similar process, and suggestions for further research. The events outlined in the dissertation culminated in the complete virtualization of the LIS service, in that all of the LIS staff were made redundant, with the service intended to be offered through an online electronic repository, which has yet to be constructed.

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Introduction

The research proposition of this dissertation is to delineate the psychological and ideological impacts of a transformative change to a small library service operating in the HE sector. As outlined below, the institution was relocating from Chislehurst in Kent to central London, with a subsequent sea-change in the way that it operated. At heart this change was from a 'craft-based' person-oriented environment, to one that was almost entirely digital in content and delivery.

The outcome of this process was that all of the LIS staff employed at the institution (including the writer) were made redundant in September 2010, with students being offered a purely online information environment from that point onward.

Ravensbourne College of Design and Communication is a small specialist Higher Education Institution (HEI) located in North Kent. The college specialises in broadcasting, design, and fashion. In 2002 the Board of Governors decided that to ensure a sustainable future for the college it should relocate to a more central location in London, as the infrastructure of the college was ageing (built in 1976). The College is to re-locate to the Greenwich Peninsula in 2010. As well as re-locating to a new building, the pedagogic landscape of the college is also undergoing a transformation from a traditional craft-based didactic culture to a more collaborative 'constructivist' approach to education. This has been mirrored by the introduction of a college Virtual Learning Environment (VLE) [Moodle] which enables collaborative online spaces to be constructed and by a move towards 'mobile-learning' (the ability for students to access learning materials whenever and wherever they wish) through the provision of laptop computers. The pedagogic changes needed to underpin these technological changes have been harder to introduce – with the craft-based vocational teaching still being seen by many academics as the 'right way' to educate our students. Within this dissertation the views of the Library staff and managers on the 'right way' to deliver an

Information Service are also likely to be a factor in the success of the transformation.

In my role as Director of Information Services at the college I was not particularly involved with the academic debate around changing pedagogies, the focus of the dissertation is on the virtualisation of a range of existing support services, leading to a virtual portal through which students and staff can access a range of information which is currently supplied by staff in the areas of Student Support, the Learning Resource Centre, Information and Communication Technology Department (ICT), Registry, and Finance. As with the pedagogic changes underway with the academic staff, there is concern within the support staff that the virtualisation of access to services will lead to a de-professionalisation of staff roles across a number of areas including the Library/ Learning Resource Centre (LRC).

The conceptualisation of the virtual nature of the service to be offered is at an early stage at present, and presents an excellent opportunity for an 'action research' approach as systems and affordances develop. The research concentrates on the psychological and philosophical nature of the changes that are to take place in the institution (and specifically the Library service) during the period to September 2010, the date of the move to Peninsula Square. This time-frame should coincide with the duration of the dissertation period on a part-time basis.

The final dissertation provides both a résumé of the factors affecting a transformation from a predominantly 'real world' to a hybrid 'virtual' service, the implications of these for staffing and resources, the influence of research methods chosen, and their impact on findings, and finally, recommendations for future transformative events.

Literature Review

The literature review takes into account recent current work by the JISC, such as the 'Institutional Innovation' (<http://www.jisc.ac.uk/whatwedo/programmes/institutionalinnovation.aspx>) programme, looking at 'Improvements to the efficiency, effectiveness and quality of educational and administrative processes within the institution(s) related to key areas of institutional ICT concern', and the work of other national and regional bodies on service provision, with a particular emphasis on the mental and psychological impact of change, particularly in an academic environment. Whilst there has been a great deal of research carried out on the technological aspects of change within academia and the Libraries sector, there has been little carried out on these 'softer' elements of the change scenario.

Context

Lynne Brindley (2006) in her paper 'Redefining the Library' noted that the main drivers for change in libraries were 'ever more rapid innovation, mostly happening outside libraries and driven by the commercial sector', with a particular emphasis on the influence of digitization. Two of her recommendations were that Libraries should 'invest more in innovation and digital activities' and that [we should] 'develop our people and ensure that [they] have the right mix of skills', these two areas form the focus of current changes in the Library at Rave. As Dougherty (2009) points out 'Libraries have always been early adopters of technology and innovative in the use of automation. Initially this pertained primarily to accessing their collections through the evolution of online catalogs', and this trend continues in the enhancement of library catalogues by the addition of images, web links, and Tables of Contents (ToCs). Indeed as far back as 1996 Periorellis and Scales (1996) described the 'intelligent enquiry system' VERITY, using an interactive

dialogue process to direct users to information. Martin (2009) states that 'the shifting perceptions of our patrons....specifically information society theory and postmodernism.... Offer a much broader view than generational differences or technological advances'.

This context enables a different view to be taken of the routes by which we can move towards a closer 'fit' with our users through the use of 'experimentation and [the concept of] playfulness' in our interactions, both technological and informational, with our users. Whilst Dougherty concentrates on the technological aspects of virtualisation, he also quotes Butdisuwan (2008) that "the majority of barriers are concerned with people issues. However, it would seem that emphasis should be placed not on technology, but on how to best enable people to participate in breaking the barriers", and it is this area that I wish to concentrate on in this paper.

Sidorko and Yang (2008) offer another view of the 'fit' between user expectations and services, users defined as both individual and institutional. They state (ibid) "changes were aimed at making the library more responsive to evolving and growing client needs, and to positioning the library as a key player on campus in terms of teaching and learning support". One of the main areas of development that they have followed has been the planning of "a new Centennial Campus Learning Commons, known as 'The Gathering Place'" a centre-piece of support services for the University of Hong Kong. The paper thus examines technological, psychological, and physical changes that are necessary to fulfill the needs of "all of our users, not only of the scholarly resources, but the physical environment, and indeed the virtual environment where [sic] so many of our users now regularly inhabit". Current awareness services mentioned by Sidorko and Yang (2008) also include SMS and e-mail alerting services for users. The dilemma that is faced by libraries of fewer visitors as a response to the unprecedented development of technological innovations in information access could be addressed by the concept of 'Library as Place' as put forward by Bennet (2005). This concept of "the library as a learning place, a new paradigm driven by two factors, the revolution in information technology, and the move in HE away from a

teaching culture to a culture of learning” is reflected in Sidorko’s (2008) observation that “[the knowledge and navigation hub] is where students and faculty can integrate learning, research, printing, and digital publishing in one place, along with leisure reading, group and single study facilities, along with the ability to eat and drink on site”. In Sidorko’s later paper (Sidorko, 2009) he describes ‘Digital Natives’ as “[those who have] spent less than 5,000 hours of their lives reading, but over 10,000 playing video games (not to mention 20,000 hours watching TV), with the possible consequence that “80% of active internet users will be participating in nongaming virtual worlds (such as Second Life) by the end of 2011”.

The British Library, in its report “Information behaviour of the researcher of the future” (BL, 2006) found strong differences between the information seeking strategies of researchers of differing ages, as can be seen in the figure below;

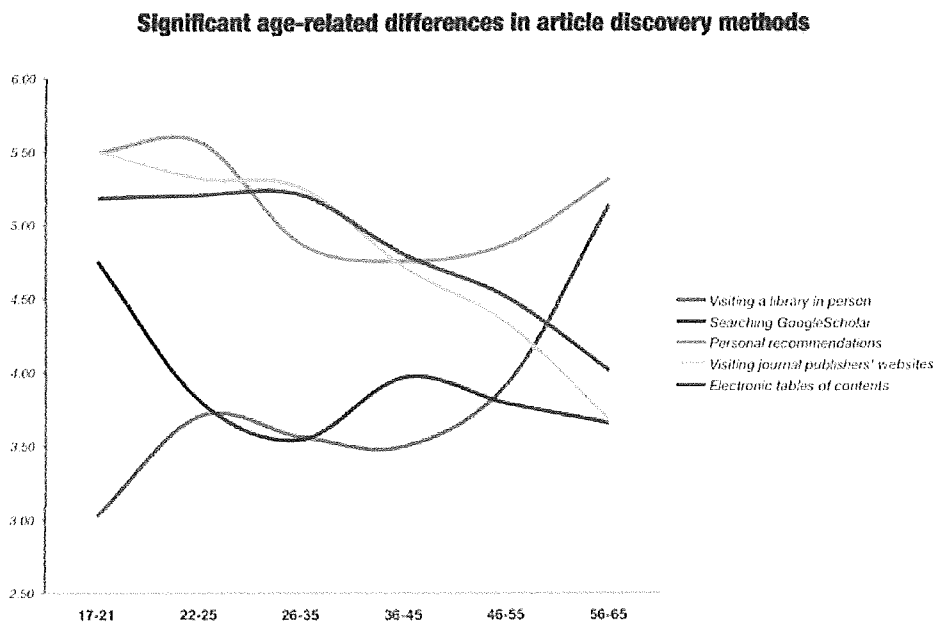


Figure 1

As a consequence of the trends noted in the diagram, the report goes on to state “The age differences are startling and they suggest that the shift away from the physical to the virtual library will accelerate very rapidly and that tools like GoogleScholar will be increasingly a real and present **threat** to the library as an institution” [my emphasis].

The report noted a number of 'challenges' that would be faced by 'traditional' library services in future. One of the main challenges was stated as the need to "Rever[se] the process of **dis-intermediation** in a full-blown do-it-yourself consumer marketplace. As they say 'we are all librarians now'. For instance, how to sell the key library role of a safe and authoritative information haven and the need for digital information literacy training." In the light of subsequent events at Ravensbourne, this can be seen as at the core of LIS professional's concerns.

It is against this background of a fundamental change in the habits of our users, that libraries need to embrace change. However, problems in the move to a virtual environment are noted, in that "the equity of the learning experience may well be compromised when significant proportions of virtual world activity is required to be done away from a well-equipped campus or school [library]" (ibid). Recent studies (Applegate, 2009) have also found that "most American colleges and universities continue to supply not only collections but [physical] spaces- for research, for study, and for group work", with many students "doing [sic] non-library-specific activities (email rather than database searching, studying textbooks rather than checking out books)". This use of, and need for, spaces and places illustrates that "the library is the preferred place for academic activity not immediately concerned with a class session".

Where services have moved into a virtual environment they have tended to follow a pattern as described by Resnick and Clark (2009);

"The concept was that, with a single click, users could report any problem with the site or resources. Tools, documentation, standardized responses to common problems, and written service expectations were developed for Tier 1. As the front line for electronic resource problems, Tier 1 staff were expected to: verify if users were authorized or not, i.e. actively affiliated with the University; check if the desired content could be accessed online; supply the full text to users if available and refer

users to the libraries' document delivery service if not; and finally, transfer the problem to Tier 2 librarians for further investigation as necessary. The service goal for Tier 1 was same-day acknowledgement and resolution of the problem, at least from a user perspective, by providing desired content or referral to document delivery”.

Current developments at Ravensbourne echo this through the use of an automated reporting system called JIRA (JIRA lets you prioritise, assign, track, report and audit your issues. From software bugs to help-desk tickets). This was initially designed for tracking bugs in software development, but is now used for help-desk work at Ravensbourne for the estates, and LRC functions.

National bodies such as JISC offer guidance to institutions in the HE sector on such virtualisation, and one of their main emphases has been on the creation of repositories such as that at the University of Southampton, as reported in JISC Circular 708 “EdSpace – An Educationally Focused Repository (University of Southampton)” which;

“aims to be a central part of the institution’s educational infrastructure as envisaged in its recently implemented e-Learning Strategy, which focuses on enabling student-centred research-led learning, inclusivity and employability. It will be a social site allowing staff and students to share resources, providing metadata, tagging, and semantic mark-up of stored items. A range of local and external tools will access the repository using services interfaces. Users will be allowed to annotate items according to an educational ontology or according to other metadata schemas, to set the access policies which will apply to items, and to create and access versions of items”.

It is the wish to move towards online dis-intermediated systems such as this that the current paper is investigating.

Within the UK this move towards a more virtual service has also be presaged by events at Bangor University which issued a consultation document stating that "The support to the academic and student communities from the qualified subject librarians, whatever its contribution to the teaching and research roles of the institution, is hard to justify in value-for-money terms at a time when the process of literature searches is substantially deskilled by online bibliographical resources" (Quoted in; Curtis, 2005). The posts were subsequently removed from the university. In the public library sector there are also changes afoot with the DCMS report on 'The modernisation review of public libraries' stating that "Digital media offer new opportunities to libraries. They can help the service to: Be more accessible more of the time. Bridge the digital divide for those people without online access or skills. Offer a broader range of content and resources and new ways of accessing, manipulating and comparing information. Attract new users to library services: a recent survey suggests that online usage has a positive effect on in person visits in libraries. Be more efficient and cost effective, both directly for the public and the back of house operation" (DCMS, 2010). Whilst extolling the virtues of a more digital/virtual approach to information, the document does not consider the proposition that this may result in a reduction in the staffing levels in public libraries as seen at Bangor and Ravensbourne.

Attitudes to Virtual Change

Twelve years ago Travica (1997) stated that "[in future] Librarians can be either strategically dispersed throughout the home organization, or they may not need to relocate physically closer to library users because they can be 'virtually present' anywhere through computer-mediated communication and electronic delivery of holdings." The use of library blogs such as the CDBlog at Hong Kong University, and the Wiki at the same organization (wiki@HKUL) are examples of this 'virtual presence' (Sidorko, 2008). Gerolimos and Konsta (2008) state that libraries "now face a new information and social environment, radically different from the functional environment of the traditional library, and that, as the human parallel of the institution the information professional has to act in the same context". They go on to

contend that “technostress, technophobia, lack of standardization and quality, and competition with search engines and commercial tools” are some of the factors that influence the role of the librarian when hoping to adapt to this changed environment. They conclude, however that “even though librarians are facing challenges for new and emerging skills, the most important aspect of the change is to be able to adapt the existing skills – many of which are traditional librarianship skills – and the ability to remain flexible in an environment that is constantly changing”.

Wilson and Halpin (2006) suggest that “As hybrid libraries have become the ‘one-stop university information shop’ in the UK, a growing emphasis has been placed on generic customer service skills, as customer experience and satisfaction are ‘inextricably linked with quality’. This, in turn, can have negative effects upon the elitist concept of professionalism”. This move towards a one-stop-shop model has also meant a move towards ‘work assimilation’

“Library staff have found themselves dealing with more and more computing enquiries, encouraged by an increased ability in IT-related areas, and a customer service ethic that obliges staff to deal with all enquiries that come their way, as opposed to referring the enquirer to another member of staff. Equally, computing staff are expected to assume the role of information/library assistant when required, a role that is being accommodated by job descriptions for both disciplines. This has raised some issues for professional identity, but is accepted as an inevitability” (Wilson and Halpin, *ibid*).

Smith (2005) outlines some radical means for preparing the ground for change stating that “Without a sufficient level of dissatisfaction with the current state of things, and a concomitant desire for change to a new order, efforts to achieve organisational change may be doomed to founder”, going on to cite an example from Kotter (1995) of “business leaders who have deliberately created major crises in their organisations primarily as a way of generating sufficient impetus to achieve major organisational change. In one

instance a senior executive commissioned a customer satisfaction survey knowing full well that the results would be terrible and then increased the pressure on his organisation by making the survey results public!"

In a later paper Smith (2007) further accentuates that "disruptive technologies are changing our societies and our library services in significant ways. The clients that use our products and services use them differently to...even one or two years ago", and that "the challenge is to keep up or be left behind". An aspect that Smith identifies is that "change resistance is natural, and an expected part of any organizational change, with changes being overturned by either organizational inertia, a desire by some to return to old ways, or a combination of both". He further suggests that the LIS profession needs to "move away from the stereotype of the Nancy Pearl action figure doll with the "amazing push button shushing action". Aharony (2009) takes this further by suggesting "that academic librarians are less open to change than school librarians and public librarians. This may indicate that academic librarians feel more secure about their professional standing, and are therefore less open to change than their counterparts." It has been stated (Shenton, 2009) that in certain discipline areas (particularly art and design)

"In some instances, even when the same content is being sought, paper works are much more preferable. Several teachers of fine art have drawn the author's attention to the fact that, on web pages, reproductions of paintings are often small and, when enlarged, lose much of their definition, with the result that fine detail in the pictures and brushwork characteristics associated with the style of the artist are not as readily apparent as in reproductions found in books".

For the purposes of the current paper it should be understood that the end result of the current moves towards a 'virtualisation' of library services in an art & design environment could lead to the reduction, or even the disregarding of print collections altogether.

Gillam and Oppenheim (2006) address the introduction of 'Virtual Teams' into an LIS setting with an initial review of the term 'virtual' thus, "Lipnack and Stamps, 2000) explain that the word 'virtual' can be traced back to a Latin meaning of 'effective because of certain inherent virtues or powers.' [1, p. 16] They put forward three contemporary meanings as follows:

"(1) 'Not-real' but 'appears to exist'. Something that appears real to the senses but is not in fact. However, virtual teams are definitely real and not

electronic representations of teams. Despite the efforts of one of us, the term 'virtual library' has gained quite wide usage with this meaning in mind.

(2) 'Not the same in actual fact' but 'almost like'. Virtual teams do act virtually like a team, but with differences.

(3) 'Virtual' as in 'virtual reality', a recent meaning invented for an emerging capability. This, they say, suggests future developments and digital realities."

The structure of virtual teams often differs to that in 'analogue (or real world) teams in that "Virtual teams often enjoy a flatter organizational structure than traditional teams. While there may still be a hierarchy for formal purposes, functionally, people will work in clusters of empowered teams rather than in the traditional pyramid structure"" (Gillam et al).

It may be that many real world teams are beginning to adopt this form or structure, as numbers of managerial posts are reduced due to financial or organizational restraints.

Another aspect of the changing online environment is the development of 'Virtual Research Environments' or VREs. Wusteman (2008) notes that librarians are often used to contributing to VLEs within an institution, but that "librarians need to be pro-active in identifying and advocating their potential roles in VRE development and use". The same article notes that "most librarians see their functions in five years' time as being teachers of

information literacy, and custodians... of digital resources...rather than the administration or management of VREs” (ibid). The virtualisation of the process and outputs of academic research requires the input of the library and information science profession to ensure that standards and interoperability can be achieved across a range of platforms.

Research Design and Methodology

The nature of the research task dictated that the methods used needed to capture the less tangible, psychological aspects of transformative change on the individuals involved in that change. Because the research task centred around these effects it was decided that data collection methods such as direct observation would not be used, because the research was concentrating on what individuals and teams felt, rather than what they could be observed to do. The research was not overly concerned with the particular abilities of the sample group, and therefore standardized tests were not appropriate. The ‘private’ ‘internal’ nature of the research proposal dictated that the data could only be obtained by questioning through an interview and questionnaire process. Because the situation being researched involved a very fluid set of circumstances it was decided that the analysis of the data should be carried out using Checkland’s (1981) ‘Soft Systems Methodology’ (SSM) in order to capture both technological and human-centred information due to the real-world temporal nature of the context. This research is mainly qualitative, as it is the human-centred aspects of the virtualisation that are of interest, however there were some quantitative aspects of the process which had a bearing on the progress of the project, and these are considered within the dissertation. Delbridge (2008) notes in her paper that “[library systems design] is particularly suited to an SSM approach where the subjectivity of stakeholders in a situation [is] key to [their] establishment”. The SSM approach is particularly useful in that it addresses a number of elements within its Root Definition. These elements, remembered by the mnemonic CATWOE, identify the people, processes and environments that contribute to a situation, issue, or problem that you need to analyze. There are six elements of CATWOE.

Customers - Who are the beneficiaries of the highest level business process and how does the issue affect them?

Actors - Who is involved in the situation, who will be involved in implementing solutions and what will impact their success?

Transformation Process - What processes or systems are affected by the issue?

World View - What is the big picture and what are the wider impacts of the issue?

Owner - Who owns the process or situation being investigated and what role will they play in the solution?

Environmental Constraints - What are the constraints and limitations that will impact the solution and its success?

The CATWOE matrix aims to contextualize the qualitative data through a template approach which enables the researcher to tease out the relationships that lay behind the actions that can be seen to take place within the situation being researched. Whilst the CATWOE methodology allows for the examination of a fluid situation, it is by its very nature a non-specific method. The concepts involved are 'necessarily ambiguous' (Basden, 2002) in order to allow for the fluidity to be expressed through the analysis. For example the definition and context of the 'Owner' category

"...has always proved difficult. Checkland often crystalises the meaning as "Those who could stop the T [transformation process]" - but he then has to qualify this immediately by saying it does not include terrorists who might 'stop' T by blowing the whole system up, and adds that O involves formal power. But what constitutes formal power is not clear: e.g. does it reside in the restaurant owner or the chef, in the leader of a research project or the funding body? Ownership seems on occasion to reside in several places" (Basden *ibid*).

This degree of 'uncertainty' whilst allowing for a measure of fluidity within the analysis, also means that 'firm' or 'definite' conclusions cannot be reached through this methodology.

Through day-to-day contact with the participants in the overall re-location project, and a number of 'relocation workshops' (see detail below), the researcher has been able to build 'rich pictures' of the interactions and activities of these participants in order to understand the underlying human factors that are in play. Whilst the construction of a shared 'rich picture' would be of great interest, the timeframe, and day-to-day workloads of the participants make this unlikely, therefore a series of rich pictures from the participants have been compiled.

Two workshops took place, involving all of the library staff (9 participants), the Director of Finance (who had been tasked with bringing together the idea of a 'one-stop-shop' for the new building), and the Director of Relocation (whose responsibility was for the overall relocation project). The workshops were conducted as 'World café' sessions, which the researcher had previously experienced as part of the JISC 'E-learning Benchmarking' exercise. Brown and Isaacs (2002) describe this methodology as;

".... a creative process set in a cafe setting. The event either takes place in an actual cafe or else the room is set up to resemble one as much as possible: participants are seated around small tables with tablecloths and tea, coffee and other beverages. The cafe ambiance allows for a more relaxed and open conversation to take place. Often participants are provided with pens and are encouraged to draw and record their conversations on the paper tablecloths to capture free flowing ideas as they emerge. Participants discuss the issue at hand around their table and at regular intervals they move to a new table. One participant (the table host) remains and summarises the previous conversation to the newly arrived participants. By moving participants around the room the conversations at each table are cross-fertilised with ideas from other tables. At the end of the process the main ideas are summarised in a plenary session and follow-up possibilities are discussed. The choice of question(s) for the cafe conversation is crucial for the success of your event. In general it is useful to phrase

the questions in a positive format and in an open ended format to allow a constructive discussion. If participants do not find the questions for discussion inspiring the event is unlikely to be successful, it can therefore be good to develop the question together with some of the intended participants”.

Participants at the sessions were presented with a series of scenarios covering interaction with students, materials, professionalism, space, staff, and ‘next steps’. Following presentations from the researcher (as Director of Information Services) and from the two other Directors present, the group were invited to comment on each of these areas on large flip charts, which were collected at the end of each session. The data from the flipcharts was then transferred to ‘Paint’ for inclusion in this paper. This was accomplished by merging a number of the elements from the rich pictures that had been generated (of which there were six) and amalgamating these into the diagrams at Figs 2 and 3. The diagrams are intended to show relationships between the various elements included, thus the text box at the top of Fig 2 “The organisation must be seen to change ‘Doing things differently – doing different things”” can be seen to lead to the consequences marked in the text boxes that follow. The text boxes in Fig 3 refer in the main to the world views expressed by the staff affected by the changes that were being suggested, providing a context in which ‘doing things differently’ is seen as a possible diminution in service. The sessions took place away from the place of work and the data collection took place after the other Directors had made their presentations and left the area, thus allowing the remaining participants to be open with their responses.

In view of the flexible real-world nature of the project the researcher intended to collate information throughout the process in a Dissertation Blog, which would have enabled the tracking of information and data around the project over time, also providing a ‘reflective’ discourse space that could be utilised to offer another perspective on the project and the process of dissertation writing.

During the period May to September 2009 a Literature Review was undertaken covering Change Management in Library Services, with a particular emphasis on Higher Education Institutions, with the aim of gathering and assimilating a strong theoretical basis for the dissertation. Concurrently a blog was set up, both in order to reflect on the progress of both the Literature Review (notes of which would form part of the blog), and progress on the project itself.

From September 2009 to Easter 2010 interviews were conducted with members of the college community at both strategic and operational levels (having first secured their permission to use the data for the dissertation). These interviews were preceded by an online survey (Appendix 1) which examined respondents' opinions about a range of matters in connection with the 'virtualisation' of a previously face-to-face service offer. The survey was made available to a range of staff within the institution, ranging from the Library staff themselves to members of the Senior Management of the institution, and other staff involved in the transition process for the entire college. The survey was offered to fifteen individuals in all (from a relevant staff cohort of approximately twenty), these comprised the Library Staff, the Senior Management Team, and a selection of Senior Academics with a particular interest or involvement in the relocation project. The small specialist nature of both the institution and the information service allowing for sampling of the participants in a 'safe' way, in that the researcher already worked closely at a strategic level with colleagues on the Senior Management Team (SMT), and had an open management style and approach with the Library staff, which promoted a frank exchange of ideas and opinions. It was also accepted by the individuals within the sample group that all responses would be anonymised for the final report, and that therefore they could not be identified by their responses. Data from the survey, a total of five data sets, along with data from the Director (received via interview and letter partially reproduced at Appendix 2) was used for the CATWOE analysis which follows. All of the data from these interviews has been anonymised for the final report.

As part of the data gathering process a 'communicative space' was developed using Web2 applications such as Facebook and Skype for communications between respondents involved in the study. By this method it was possible to maintain contact and discussion with six of the Library staff until late August 2010.

From Easter 2010 to August 2010 data gathering took place, was synthesised, and written up, and both research and practical work were undertaken on the project. It was felt that the linkage between the live project and the dissertation would provide an interesting locus, around which both activities could gain from the other.

Monitoring points were built into the project in order to enable reflection on its progress, and to ensure that any elements of 'project creep' could be addressed. These centred around the frequent online contact between the researcher and the dissertation supervisors. The concentration on a particular element of the whole re-location project minimised the possibility of this occurring.

Presentation of Findings

The structure of the findings is arranged in the 7-stage representation of SSM, including root definitions:

1. Enter situation considered problematical

Stated simply the situation under consideration is a fundamental change in the way that Library services are offered, moving from a somewhat traditional face to face individual service model to a more distributed generic and virtualised approach to supporting students in their information needs.

2. Express the problem situation

The 'problem situation' centres around the perceptions of existing Library staff to the changes proposed, along with a lack of clarity as to what the changes may actually involve/ comprise, combined with a more conceptual/ideological disconnect between what the 'customers' and particularly the 'actors' perceive as the function and activities of a library.

3. Formulate root definitions of relevant systems of purposeful activity

The Root Definitions can be found under CATWOE below.

4. Build conceptual models of the systems named in the root definitions

The conceptual models prevalent in the current paper are two-fold. One system revolves around 'traditional' library and information services, generally offered 'to' customers by a trained LIS staff. The second model envisages a service which is primarily driven by the customer accessing a range of electronic and online service without the mediation of library staff, if you will, a 'virtual' service. These concepts are outlined in appendices 2 and 3.

5. Comparing models with real world situations

The real-world situation at present is that the student cohort at Rave is built around a LIS service which is seen as increasingly irrelevant by a growing proportion of users (see Literature Review). The ethos of the institution as a vocationally based HE educator, rather than a research based institution, has enabled the senior management to steer the service towards an entirely online solution, which is perceived by the Director/CEO as the *only logical progression* as we move towards a digital future. Appendix 3 set out the LIS professional's view of the best way forward for the service as part of a wider consultation process carried out towards the end of 2008, this view was rejected by the Senior Management of the institution as not sufficiently embracing the 'digital' agenda. Subsequently Appendix 2 was issued during 2010,

setting out the view that the information requirements of library users could be satisfied with dis-intermediated online access.

6. Define changes which are both possible and feasible

The definition of 'possible' changes has been a difficult process, as the base definitions of what constitutes 'possible' by the actors are diametrically opposed. On one hand you have the staff of the service, who see the service as both 'customer-oriented' and based on serving the individual student (something that has always been possible, due to the small size of the institution), and a Director who has a vision of a digital future in which the students' information seeking is driven purely by online content and delivery, without the intermediation of staff. As can be seen from the conclusion at the end of the paper, this disconnect between possibilities has led to fundamental changes in the makeup of the service.

7. Take action to improve the problem situation

As with point 6 above, the actions available to the differing actors are at a dis-connect. Whilst the strong suggestion from the existing LIS staff was for a return to a more traditional 'Library' type service (in light of the institution's move towards an 'Information Commons' format for the rest of the institution, the view of the Senior Management remained that the Library, even as it existed (as a 'hybrid' service, offering both analogue and digital access to information), could not be justified in an environment where the customers (students) of the service saw the analogue function as increasingly irrelevant.

Thus the institution's proposed solution to the problem suggests

"... that the new Learning Resource Centre Team will consist of two roles; the current proposed job titles for these roles are Digital Asset Manager and Digital Assets Assistant. This Proposal is Ravensbourne's direct response to the reduced usage of the service along with the further pressures to be imposed by the Government to reduce the £186b deficit through public sector cuts" (Baker, 2010).

CATWOE

The CATWOE methodology was designed to capture the elements involved in any change event from a number of viewpoints, thus attempting to give an holistic view of the change environment. One of the precepts underlying the CATWOE methodology is that there should be active participation by the customers, actors, and owners. If the change situation is based around a strong dis-connect between these players, this participation may not be forthcoming.

The following CATWOE interpretation is based on the information that was forthcoming from the data gathering process. This process centered around a survey of library staff and senior academics, and an interview with the Director of the institution.

Customers

The beneficiaries of the whole process are in the main the students and staff of the Library. It is likely that the expansion of Enterprise and Entrepreneurship activities within the relocated college will also lead to an increase in community and business users of the service. The staff of the Library can also be seen as 'customers' in that they are intimately concerned with the day to day activities of the service, and interactions with users.

The survey of attitudes to 'virtualisation' from library staff illustrates a range of perceptions of the place of virtual services in the range of activities between the library and its customers.

Respondent 1: Library Staff member.

The main outcomes of moving to an online service for basic enquiries would be to free up library staff members to more fully engage with facilitating research for and with staff and students.

In essence the idea of an i-desk [an early nomenclature for the virtual service] is a good one...the students would not have to go to various places for information that they need.

The main disadvantage of this model is that each department involved would feel as though their level of expertise was lost.

Respondent 2: Library Staff member.

There is an expectation that information is available through the internet 'at a touch of a button' for free, including e-books. The advantages can be a better tracking of, and quantification of enquiries and students may think more about phrasing an enquiry in text rather than face-to-face.

Respondent 3: Library Staff member.

I think it's a good move to more of anytime, anywhere type provision where students don't physically have to be present to initiate a basic request. As the world of work becomes more virtual, I think it's a positive step to encourage students to move to this way of resourcing their requirements.

On the other side of the coin, I'm guessing that this will be a potentially difficult change for some of the LRC staff who have not been used to working this way.

Respondent 5: Senior Academic

Libraries tend to be identified with the physical collection. Of course, this is a matter of semantics; that is, it depends on how you define "library".

*...*numerous* JISC studies have busted the myth that all young people prefer online material. Certainly, it's not what we see at Ravensbourne!*

From the responses above it can be seen that a range of views are held by the staff of the library, and those outside of the area. There is a general assumption that the move to a more 'blended' service, mixing digital and analogue access is positive, but concerns do remain (see below).

Director: (From: 'Future of the Learning Resource Centre' document)

In response to low usage and fast changing technology, the College has identified that the Learning Resource Centre currently has a higher staff headcount than can be justified to manage future work and it is proposed that the business is streamlined, forming a leaner structure.

Actors

The identification of actors in the process is revealing. The main drivers for change are located at the uppermost levels of the college management, and are not necessarily accepted or acknowledged by the staff of the service. Other actors are external to the college, such as funding bodies, sponsors, and commercial interests.

Respondent 1: Library Staff member.

I believe that people do not understand the full role that a library holds, particularly in an academic institution.

Librarians have in the past been stereotyped by those who don't understand them. There is a tendency to view them as being very narrowly focused and unable to relate to anyone else (I'm not saying that this is right, just a perception)!

Respondent 3: Library Staff Member

As the world of work becomes more virtual, I think it's a positive step to encourage students to move to this way of resourcing their requirements. On the other side of the coin, I'm guessing that this will be a potentially difficult change for some of the LRC staff who have not been used to working this way.

Respondent 5: Senior Academic

Libraries tend to be identified with the physical collection. Of course, this is a matter of semantics; that is, it depends on how you define "library". It depends on how the online services integrate with other online services. It is unfortunate that the actors outside of the Library staff and senior academics did not feel able to complete the survey. This may be illustrative of the dis-connection between the institution at a senior level, and the roles and functions of the library service, as exemplified by the senior academic's comment that there is a perception that "research becomes increasingly meaningless to students." It may be that this view is also held by the senior managers of the institution.

Director: (From: 'Future of the Learning Resource Centre' document)

Since 2001 there have been major technological changes such as mass digitisation of content by Google and others, Web 2.0 technology and eBooks, which are changing how staff and students choose to receive and engage with information. The College library has seen a major decline in use as technology provides immediate access to information and the borrowing of books and other items is in steep decline.

Transformation Process

The processes undergoing transformation through the relocation spread across the whole of the college. Pedagogic practice is changing from a craft-based 'one to one' practical/physical emphasis, to a more diverse digitally-based virtual experience. In the pedagogic physical environment

of the college the resources and outputs provided for and expected of the staff and students have changed, for example the institution no longer has physical wood and metal workshops, but virtual workshops with 3D printers and rapid prototyping equipment which can produce artifacts from virtual environments such as SolidWorks¹.

Respondent 1: Library Staff member.

The main disadvantage of this model is that each department involved would feel as though their level of expertise was lost. From a personal point of view I enjoy the personal contact part of my role. I would feel the need for more training in the area of producing digital content.

Respondent 2: Library Staff member.

More flexible ways of working, willingness to embrace new technology but there is a risk of losing our strengths if we neglect the traditional skills when focusing more on the digital.

Respondent 3: Library Staff member

.... I think broadening experience is always a good thing - you can potentially learn new ways of doing things to benefit all Everybody knows where to go to get an answer and not have to trawl around several areas before they get served Initially the quality of service may be patchy as people get up to speed on areas new to them. Also the tendency to stay with face-to-face may overwhelm them - they need to learn to direct people to online (in the best possible way!) so that students learn to become self-sufficient in future.

¹ SolidWorks offers the best suite of tools for engineering design, documentation, simulation, and sustainability in one easy-to-learn software package. With standards-based curriculum, industry-recognized certification, and the SolidWorks community, students with SolidWorks skills have an advantage in a competitive world [<http://www.solidworks.com/sw/engineering-education-software.htm>]

Respondent 4: Library Staff member.

In a way I think this is natural evolution and online is a good place to put certain information. This does not mean, however, that face-to-face contact should be replaced.

As long as I know how to reply to queries I don't have a problem with this. Haven't actually considered this scenario very much. But does one have to exclude [sic] the other, can't they complement each other? See reply above. Being a [sic] anywhere anytime kind of person I can only see positives in digital services (presuming this means online services). Don't, however, think they should totally replace a physical library.

Respondent 5: Senior Academic

It depends on how the online services integrate with other online services. The [library] is already in danger to be taken to new levels of marginalization as research becomes increasingly meaningless to students.

The responses gathered above form an interesting picture of attitudes to transformative change, in that they are overwhelmingly positive. Therefore it may be that change itself is not seen as a problem, the problem lies more in the perception that change badly managed leads to stress and resistance to the change process.

Director: (From: 'Future of the Learning Resource Centre' document)

In response to low usage and fast changing technology, the College has identified that the Learning Resource Centre currently has a higher staff headcount than can be justified to manage future work and it is proposed that the business is streamlined, forming a leaner structure.

World View

Possibly the most diametric aspect of the whole project is that the world view of the leading actors within the transformation is fundamentally different to that of many of the customers who are involved in the transformation. The dominant world view is driven by a belief that modern design and communications practice can and should exist mainly in the virtual realm. That through digital means the production of design at all stages can be carried out through mobile learning. This belief also extends to the existing Library service, which is being transformed from a mainly physical to a partially virtual service.

Respondent 2: Library Staff member

There is an expectation that information is available through the internet 'at a touch of a button' for free, including e-books.

I think libraries and librarians have a poor image, but as long as they can supply the information that is required, this shouldn't matter! It may discourage some people from using the services.

Respondent 4: Library Staff member

I can, however, imagine there are quite a few people who no longer see the point of libraries as a resource. At least not the way they have traditionally been set up.

Respondent 5: Senior Academic

The [library] is already in danger to be taken to new levels of marginalization as research [in the traditional sense] becomes increasingly meaningless to students.

The 'wider world' view is reflected in the comments above, in that the requirement for 'research' in any traditional form is now perceived as 'meaningless' to many students. This may be especially true of an HEI which has a vocational, work-based ideology, such as Ravensbourne. The idea that the 'library' as a concept is no longer relevant to our customers seems to be recognized by library staff and academics as being prevalent. A number of these concerns were also identified in the series of 'rich pictures' developed through a workshop process with library and other staff during the second half of 2009 (see fig 2)

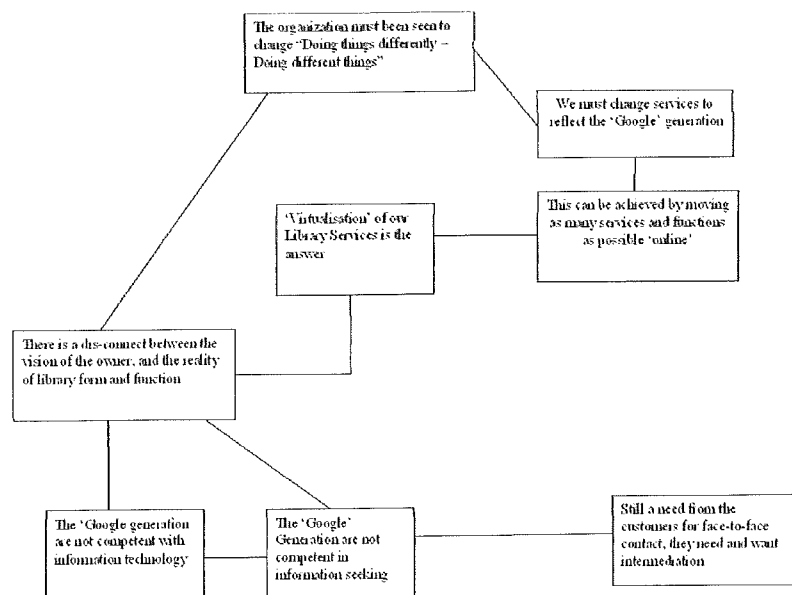


Fig 2

As can be seen in Fig 2, the world view of the top levels of the organization, that we must "do different things" to "satisfy the Google generation" is at odds with the perceptions of the staff dealing with the students on an operational basis, who feel that such virtualization is not the answer. This basic dis-connect between those with the 'power' within the organization, and those who were acting on the ground led to a clash

of ideologies, resulting eventually in a redundancy exercise for all of the LIS staff.

The world view of libraries, and the ways in which researchers search for information as a concept was also a matter of concern raised through the workshop process (see fig 3),

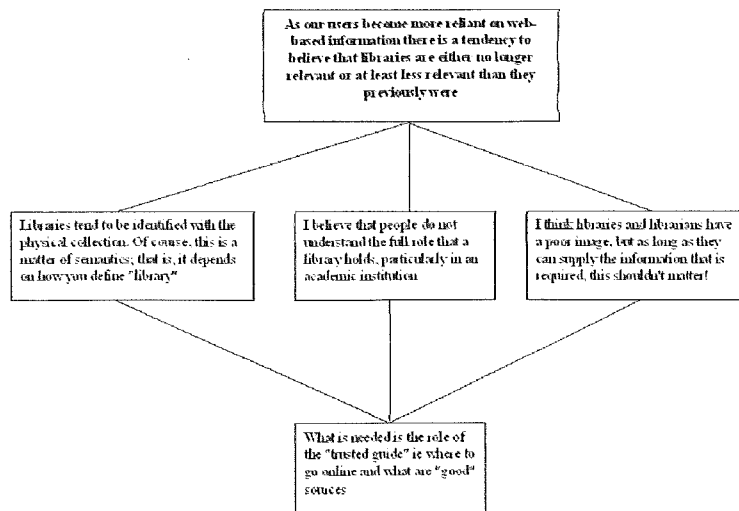


Fig 3

What this picture reveals is a link, not between the library function and the 'place' that the library may hold, but a link between the library, and the functions that the staff perform, almost a dis-connect between the idea of the 'library' and the satisfaction of the customer need. This was also illustrated by Wilson and Halpin (2006) "The professional philosophy that prescribes an allegiance to service provision rather than to a professional identity will, in time, challenge the justification of such a professional bar. As such, it may be inevitable that promotion to professional grades will be made more accessible for para-professional staff in the future. Such inevitability is supported by the current widespread trend of graduate recruitment to para-professional posts,

and the increasing desirability of generic, rather than specific subject-related skills. Professions require a prescribed course of study and qualification in order to maintain professional status, and as a means of control over recruitment and entry to the profession. If professional qualifications in librarianship and information management are to be devalued, then this will have consequences for the professional identity of the sector as a whole". It is interesting to note that the current study identifies that staff in the Library service also seem to have a shifting allegiance to 'service provision', whilst simultaneously fearing the 'de-professionalisation' of their perceived roles.

Director: (From: 'Future of the Learning Resource Centre' document)

The College believes that it is now a more important skill to be able to source something rather than own it and therefore the positions currently in place in the Learning Resource Centre do not match the expectations of the 21st digital information service.

Another pressure on traditional book publishing is the launch of Kindle and other dedicated devices culminating in the launch of the ipad. Ravensbourne College has a policy that will provide a laptop for each full-time and fractional member of staff and every student. This is now well underway and by the time the College moves, mobile computing will be ubiquitous and therefore it is proposed that a 'walled' space will be no longer be necessary or desirable.

Owner

The main owner of the situation is also the main actor within the environment. However, solutions to the 'problem' are generated by the customers. Whilst there is an understanding of the generality of the transformational change needed at ownership level, the specifics of the transformation are less clear.

Respondent 5: Senior Academic

*Some libraries can do better to align their services with their clientele, [but] *numerous* JISC studies have busted the myth that all young people prefer online material.*

As noted above the 'owner' of the situation in as much as the entity that has overall 'control' of the situation may well be experiencing a dis-connect between the need for transformational change, and the implementation of same, particularly in relation to the Library service, but also in other areas of change within the institution. This is reflected in the quote below, which appears to refute that made by the senior academic.

Director: (From: 'Future of the Learning Resource Centre' document)

[The move towards] mobility is in response to users' changing lifestyles and affordable mobile technology that is central to Ravensbourne's vision of learning any time anywhere. The College believes that it is now a more important skill to be able to source something rather than own it...

Environmental Constraints

As with all major transformational events there are constraints. Many of these are financial, with funding for many of the changes (investment in new technologies etc.) being limited. Whilst the financial constraints are being addressed, it is more likely that philosophical and psychological attitudes will have the largest impact on the outcomes of the project.

Environmental constraints are beginning to impact on the transformation of services within the institution. External factors such as the HEFCE funding settlement are still (at this time) likely to fluctuate, with a subsequent uncertainty about the funding, particularly of the fit-out of the new services. The general construction and completion of the building is costed and funded. The fitting-out of the building at an operational level is still open to funding fluctuations, many of which are outside of the control of either the

actors, or the 'owner' the project. The Government Spending Review due in autumn 2010 will put further pressure on the institution to reduce costs with "Departments...being asked to demonstrate how they might make savings of between 25% and 40%. Defence and education spending will not be exempt, but should see less harsh cuts of 10% to 20%.

According to the IFS, that could see unprotected departments such as the Home Office have their budgets cut by 30%." (Lane, 2010). This forthcoming reduction in central funding was also put forward as a justification for the redundancy exercise at Ravensbourne.

Discussion of Findings

Methodology

Methodologically the decision at an early stage to run a blog in order to monitor and gain data from participants proved unfeasible. The lack of experience of both the researcher, and the other participants in 'blog' culture, or the use of blogs at all, proved to be a major stumbling block for this area of enquiry. Regular tutorials with the supervising team enabled the researcher to monitor, and receive feedback on, processes and progress throughout the research and writing process. The use of Skype, Facebook, and e-mail enabled the respondents' involved in the research process to keep in touch, and to exchange views and data.

The generation of 'Rich Pictures' by participants in the transformation process enabled the researcher to identify those aspects of the change which were of particular concern. These had been generated through a series of workshops which were held as part of the general preparation for the transformation of the institution, as well as for the particular concerns of the Library and Information staff. As the rich pictures had been constructed in a face-to-face, analogue environment, they were not suitable in this format (mainly marker

pen on A1 sheets) to be included graphically in this report, and have been rendered into two summary graphics using Paint.

The process of data gathering, and the outcomes of the survey process, are outlined below.

Literature Review

The literature review showed that there was a wide range of information available on the technological impacts of change, but not the same quantity of research around the 'soft-systems' involved in the changes outlined in this research. However the review did highlight that the area of 'soft systems' was an important aspect of any change management programme across the LIS sector, as well as in many other areas of societal fluidity.

Data Gathering

The construction and running of the online survey was smooth, with a test-run of the survey on a trial group of respondents before the survey was issued to the whole target group. The test-run enabled the researcher to gauge the responses to the survey in light of the information that was required. The test run having been successful, the survey was opened to the full group of respondents.

As Wilson and Halpin (2006) have noted "Qualitative research interviews are most appropriate when a study is primarily concerned with the meaning of a particular phenomenon to the interviewee(s); when individual perceptions of a process are to be studied; when a historical account is required from an individual; for exploratory work required preceding a quantitative study or to validate a quantitative study".

Responses to the survey were limited in that only a few of the full group participated in this phase of the data gathering exercise. Only 30% of those who were invited to respond to the survey felt able to do so. At the time of the

survey the researcher found this somewhat demoralizing, but realized that the reluctance to contribute could be an interesting field to explore in itself. The respondents to the survey were either the staff of the LIS service, who were all line-managed by the researcher, or senior academics with whom the researcher had a good pre-existing working relationship. It might be seen that these respondents were acting within the hierarchical structure inherent in the institution, and felt that they 'had' to contribute, although this was never explicitly stated. The non-respondents were in general the researcher's colleagues on the Senior Management Team of the college, in light of the outcomes of the 'virtualisation' exercise, this could be seen as prophetic.

This is perhaps illustrative of the difficulty experienced when attempting to investigate the personal and psychological impacts of change. The respondents did however provide some contextualization through comprising both library staff, and academics observing the library from 'outside' if you will. Those of the group that did respond did so openly and were all open to entering the interview process as a follow-up to the initial survey, the findings of the survey and interviews can be found below. There were, however, a number of problems around the area of communicative space. Throughout the data gathering phase of the project the researcher was aware that he would have to enable a 'communicative space', defined by Kemmis (2001) as "embodied in networks of actual persons...constituted as issues or problems are opened up for discussion...permitting people to achieve mutual understanding and consensus about what to do" and further described by Gaya Wicks and Reason (2009) as "that delicate place where the lifeworld meets the system, a liminal, in-between space where two opposing qualities meet".

The opening up of such a space should enable a fuller picture of the interaction between the lifeworld "a community's shared common understanding of 'who we are' and 'who we value being'" (Habermas, 1984) of the participants, and the research aims of the researcher. The nature of action research in that it "can be seen as involving a particular kind of interpersonal relationship that blurs the boundaries between traditional roles of researchers

and researched” (Arielli et al, 2009) also proved problematic in the writing up of this dissertation. As with Arielli (2009) “One of the difficulties in writing the article, as first-person action research involving multiple actors, was deciding how to talk about ourselves [myself]. In order to facilitate the ease of reading, most of the case study and analysis are written in the third person. However, at various points we [I] shift into the first person”, this blurring of emphases between the personal/subjective and the impersonal/objective is a particular quirk of action research.

In this particular project the engagement of the researcher in the lifeworld of the participants was flawed. Although the researcher had been a ‘participant’ in the ‘lifeworld’ of the majority of the participants for a number of years, he had (following promotion) not been intimately involved with this particular ‘common understanding’ for approximately 3 years. The researcher did, however have a common understanding with another group of possible participants through his current organizational contacts (an organization with a strong hierarchical structure), the majority of whom chose not to participate in the project, perhaps because of a perceived hierarchical power imbalance between the two ‘lifeworld’ groups.

With a background as outlined above, it is not surprising that this phase of the research never really proceeded beyond an ‘intermediate group’ described by Randall and Southgate (1980) as forming when “action research projects... are programmatic, designed and initiated from *outside* [my italics] and imposed on participants... more likely to emphasize system requirements over lifeworld”. The particular lifeworld in which many of the participants found themselves in the period leading up to the research also contributed to the challenging nature of the project due to a strong feeling of disempowerment, both in the researcher and the participants in the research process.

There was also a perception that due to the “lack of structure, excitement with [collaborative enquiry’s] open-endedness, and uncertainty with its unpredictability” (Treleaven, 1994), that participants were nervous about the outcomes of participation, especially coming from a very hierarchical,

systemized organizational background. This led to a position of 'functional participation' "characterised by predetermined objectives [rather than] 'interactive participation' in which the group takes control over decision-making" (Baker Collins, 2005). This led to a situation in which the researcher felt unable to continue with the data gathering process beyond this initial 'functional participation' phase, due to the dis-connect between the system of collection, and the 'lifeworld' clashes between the two main groups of possible participants in the process.

The choice of an 'action research' perspective for the determination of the qualitative effects of the dis-intermediation of LIS staff in the HE environment appeared a logical choice at the outset of this project. Following the outcomes noted above, it may be that this approach, whilst theoretically the most suitable for 'soft' research, is pragmatically very difficult to enable in certain hierarchical environments. Within the particular research environment undertaken, the effects of the changes on the researcher as well as the 'researched' made this form of participatory research very problematic.

CATWOE

The use of the CATWOE system of identifying roles and participants in a fluctuating fluid system proved very useful for identifying the Root Definition within the overall picture of the transformational change, although the non-participation of actors and owners from the higher management levels of the institution meant that only a partial picture could be formed of the overall picture. Later developments (such as the "Future of the Learning Resource Centre" document) have enabled a fuller picture of the underlying ideologies to be formed.

Conclusions

This paper has considered the 'soft-systems' impact on staff of a proposed move towards a virtually-based library and information service in a small HE library. Through use of the CATWOE system devised by Checkland, it has been possible to 'map' the changing attitudes of staff towards the changes involved in the 'virtualisation' and to investigate the ideologies that have lain behind the moves. Although the CATWOE matrix was designed to interrogate the fluid systems that are involved in strategic and technological change, the methodology proved difficult to implement due to the very nature of the problem being addressed. Future researchers should be aware of the difficulties of encouraging participation inherent in this methodology. Researchers attempting to implement an 'action research' methodology in a 'real-life' situation should also be aware that the degree of 'buy-in' required by this methodology may not be forthcoming in difficult change-management environments.

Much of the change agenda has been driven by the particular environment within the organization being investigated. The organization is small, with strong central governance led by the Director/ CEO. The particular vision put forward by the CEO is of an educational service which is driven by technology, student centred, and capable of agility in change management on a very short time-scale.

As can be seen from the comments gathered in the data section of the paper, this vision was not shared by a significant proportion of the LIS staff, who were concerned at the loss of face-to-face contact with a student body that was not entirely conversant with the information seeking process. This ideological dis-connect eventually led to the library staff being made redundant, as the organization felt that they were hindering the move towards a more 'progressive', virtually-based LIS service. The nine LIS posts were replaced by two 'Digital Assets' posts, aimed at expanding the delivery of web-based information to the student cohort. The physical collection of books

and periodicals was to be kept, but not developed beyond the move of the institution to new premises in September 2010.

A number of existing LIS staff applied for the 2 'Digital Assets' posts, but were unsuccessful in their applications. It may be assumed from this that the exercise was constructed to give the institution a 'clean slate' from which to launch replacement services, as it was well known that the existing LIS staff were committed to keeping major elements of the physical 'analogue' service following the move to the new building.

This particular vision of virtualization has led to the decimation of the physical staff of the service, it remains to be seen what the effect is on the information seeking and utilization of the student body following the change. If the 'world-view' expressed by appendix 2, the Bangor experience, and the BL report (2006) holds sway, it may be that the vision of a virtual LIS service within HEIs, unsupported by LIS staff, and relying on the information seeking behavior of our students becomes the norm for institutions seeking to cut costs and be perceived as 'progressive',

The move towards more virtual provision of information, by both academic and public libraries needs to be considered in light of the developments at Rave and Bangor. A political and possibly professional understanding of the benefits of access to online information can easily be interpreted by managers and administrators as a concomitant reduction in the need for LIS staff to support users in their information seeking.

Future Research

Future research should concentrate on the impact of ideology on 'soft-systems' such as staff, as much of the existing research (Brindley, BL, Applegate etc.) has concentrated on the technologies and 'spaces' that can be developed as part of digitisation, along with the impact of the virtualization of a service on the information seeking activities of students. The clash of

ideologies between an analogue or person-based service, and a digital computer-mediated service, and the effects that these have on the aforementioned areas could be a rich area for future work. As Lynne Brindley (2006) said in her paper 'Redefining the Library' libraries should 'invest more in innovation and digital activities' and that [we should] 'develop our people and ensure that [they] have the right mix of skills', whilst these are laudable concepts, it can be seen from the research above that there are more fundamental questions that need to be asked around the interface between staff, resources, and users when digitisation is proposed.

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Appendices

Appendix 1

Online Data Collection Form

Virtualisation

Dear Colleagues, For my MSc in E-learning I am researching the impact of the move towards a more digital approach to our information services, and the effect that this is likely to have on us as professionals/ para-professionals in the library service at Rave. A small group of other stakeholders within the college who are engaged in the change process will also be asked to take part. I would be hugely grateful if you could take the time to answer the questions in the following survey. All the data collected will be treated in line with good ethical practice, in that the results will not be seen by anyone other than the research team (myself and my supervisors at Edinburgh).

Confidentiality and anonymity are assured. I would therefore urge you to be open and honest with your replies to the survey, as this will help me to more accurately reflect the psychological impact of the changes that we are undergoing in library services and the wider college community. Many Thanks, Steve B.

As our users become more reliant on web-based information there is a tendency to believe that libraries are either no longer relevant or at least less relevant than they previously were. Do you think that this view is widely held?

Yes

No

If the answer to the above question was 'yes' please state what you think has caused this view.

If the answer to the above question was 'no' please state what you think has caused this view.

As part of the relocation process, we are asked to move some of the current LRC information services, such as basic queries, online - moving towards a virtualization (provision of the service outside of the face-to-face environment) of the service. What do you think will be the main outcomes of moving to online services?

It has been argued that librarians and library groups have too great a tendency to focus on the ordinary and the mundane. Do you agree that this is the case?

Yes
No

If the answer to the above question was 'yes' please state what you think has caused this view.

If the answer to the above question was 'no' please state what you think has caused this view.

Oreg (2003) identified four factors are often related to an individual's personality which can cause resistance to change, these are: (1) routine seeking – a preference for routine over changes in life; (2) emotional reaction to imposed change; (3) short-term focus – the immediate inconvenience effects of a change; (4) decisiveness – the ease and frequency with which individuals change their minds. Do you feel that any of these 4 factors are relevant to you during this change at Rave?

Yes
No

If the answer to the above question was 'yes', please specify which of the factors below

1
2
3
4

Please comment further on any of the factors below;

The 'i-desk' concept is built around a number of student facing services coming together in a single service offering information both face-to-face and virtually. How do you feel about other service teams being involved in dealing with Library based information seeking by users, and you're having to deal with other service enquiries?

What do you think will be the main benefits of offering a range on face-to-face and virtual services from a single point in the new institution?

What do you think will be the main disadvantages of offering a range on face-to-face and virtual services from a single point in the new institution?

The move towards a more 'digital' approach to the way in which we offer library services is seen as necessary in order to provide a more 'customer-focused' service to the 'net-gen' users who form the majority of our student cohort. What do you see as the main impacts on your role as we move towards this new configuration of services?

If you would be willing to take part in a further interview looking at these questions, please click on 'Yes' below and I will contact you.

Yes

No

(Survey distributed on-line to staff at Ravensbourne, March 2010)

Appendix 2

“Future of the Learning Resource Centre” Paper

Since 2001 there have been major technological changes such as mass digitisation of content by Google and others, Web 2.0 technology and eBooks, which are changing how staff and students choose to receive and engage with information. The College library has seen a major decline in use as technology provides immediate access to information and the borrowing of books and other items is in steep decline.

Another pressure on traditional book publishing is the launch of Kindle and other dedicated devices culminating in the launch of the iPad. Ravensbourne College has a policy that will provide a laptop for each full-time and fractional member of staff and every student. This is now well underway and by the time the College moves, mobile computing will be ubiquitous and therefore it is proposed that a 'walled' space will no longer be necessary or desirable. This mobility is in response to users' changing lifestyles and affordable mobile technology that is central to Ravensbourne's vision of learning any time anywhere. The College believes that it is now a more important skill to be able to source something rather than own it and therefore the positions currently in place in the Learning Resource Centre do not match the expectations of the 21st digital information service.

In response to low usage and fast changing technology, the College has identified that the Learning Resource Centre currently has a higher staff headcount than can be justified to manage future work and it is proposed that the business is streamlined, forming a leaner structure.

It is envisaged that the new Learning Resource Centre Team will consist of two roles; the current proposed job titles for these roles are Digital Asset Manager and Digital Assets Assistant. This Proposal is Ravensbourne's direct response to the reduced usage of the service along with the further pressures to be imposed by the Government to reduce the £186b deficit through public sector cuts.

(Produced by the Director/CEO of Ravensbourne, May 2010)

Appendix 3

Information Services at Greenwich Paper

Context

The current LRC service at the Chislehurst site comprises a modern Library service with access to electronic materials, and a printed materials collection, it also houses the IT helpdesk. The service at Greenwich will be expanded to include the central help and information point for the institution, as well as supporting collaborative work between staff and students 'at the heart of the college community'.

Services

The information service at Greenwich will consist of the collection of physical and electronic materials, the iDesk (general information point for the College), and a staff function around pedagogic and information literacy support for staff and students.

The printed materials (books and periodicals) will be stored/accessed in a single area (designated as quiet study), allowing for the reflective space necessary in a collaborative environment. This function of the information service will occupy approximately 180m² (?) of level 2b. By zoning this as a quiet area the rest of the space on 2b can be utilized as a more 'social-learning' environment.

160m² (?) will be provided for a collaboration area in which students can access information, technologies, and display equipment in a semi-social environment, allowing for cross-disciplinary interactions.

A third area of 340m² (?) (which will be located outside of the security system) will allow for display and exhibition of student work in a 'public' arena of the upper atrium floor.

Stock

A selection of printed materials occupying approximately 560 linear metres of shelving at 5 shelves high (to include journals in compact).

It is suggested that our current collection of analogue videotape is placed in storage (either on-site or nearby) in order that it can be accessed when there is a need for a certain item, which can then be digitized and added to the digital collection (which currently covers the last 2 years). Analogue materials which are not used will be disposed of, allowing for a time-limited storage

solution. Any digitization of current content, or conversion of analogue content is a 'shared office area' task, and should take place outside of the LRC/Library area.

2 (or more) self-issue/ self-return units, with appropriate staff backup provided by the iDesk/ roaming staff.

Staff

Staffing functions will be split between those offering a student centred information and support function (through the LRC and the idesk), and those providing the 'backroom' services needed to support the Information Service of the college.

2 'roaming staff' (Para-professional Information Assistants) in the LRC area to assist with student and staff enquiries (to include 0.5 on iDesk, if iDesk is within the security system of the library).

2 staff (1 professional/ 1 para-professional or 2 professional if including A/V) to deal with acquisitioning/ ordering/ cataloguing/ materials as they arrive (in shared office area)

2 staff to assist academics with pedagogic development of e-learning solutions (in shared office area) These will not be based in the Library/LRC area, and may not be within the same Line Management hierarchy.

Training Requirements

All of the staff operating the iDesk will need 'Customer Care' style training as part of their induction to the role, along with orientation training around the location of information and support services throughout the college.

Functions (Staff)

Information Literacy Training (p2p and iDesk)

Information Seeking assistance (p2p and iDesk)

Dissertation Support (p2p and iDesk)

General enquiry/ referral work (iDesk)

Acquisition/ cataloguing/ accession of new materials (Outside of main Library/LRC area).

Technical/Pedagogic support for academic staff in developing e-learning solutions. (Outside of main library area)

Functions (Resources)

Reflection Area: Printed resources + 30 user spaces
Collaboration Area: Display equipment + 30 user spaces

Both of the above will be within the 'security' area of the Information Service, and will need sufficient power points for laptop charging and running.

Display/ Exhibition Area: Display Equipment/ Social seating + 100 user spaces. Floor points for power should be made available across this area in a similar grid to the 'open access studios'.

The Display/ Exhibition area will be outside of the 'security' area of the Information Service. (See Annex 1)

Conclusion

The service will run with between 4 and 6 staff dependent on functions remaining within the LRC (there is no provision within the above for reprographics). Opening hours will be extended through the use of student helpers and the use of staff from other areas of the college to man the idesk (to be trialled in 2009-10). By integrating the idesk function with that of the LRC we should be able to offer an improved level of service for all of our users, and improved working conditions for Information Services staff through increased use of flexi- and staggered working hours.

ANNEX 1

Floor 2b: The security line would run across the floor between the lift and the external wall following the line of the idesk. This would allow the idesk to function as the contact point for LRC services as well as the general information point for the institution.

(Produced by the Director of Information Services, Ravensbourne, November 2008)